

Answer the following three questions (the questions in two pages):

Question1. Read the following expressions: (15 Marks)

(1) $\lim_{x \rightarrow 5} 2x^2 - 3x + 4.$ (5Marks)

(2) $(x + a)^n = \sum_{k=0}^n \binom{n}{k} x^k a^{n-k}.$ (5Marks)

(3) $\int_0^{\infty} (6x^3 + 6!)dx.$ (5Marks)

Question2: Write true or false. Correct the false statements. (30 Marks)

- 1) A quadratic equation is an equation involving the three power, but no higher power of an unknown.
- 2) A quadrilateral is a five-sided polygon.
- 3) If $x = ky$, where k is a constant, then x is said to be proportional to y .
- 4) An improper fraction is a fraction with a denominator that is greater than the numerator.
- 5) An isosceles triangle is a triangle with three sides of equal length.
- 6) A parabola is the set of all points in a plane that are equally distant from a fixed point (called the focus) and a fixed line.
- 7) A perfect square is an integer that can be formed by squaring another integer.
- 8) Two lines are perpendicular if the angle between them is a 70° angle.
- 9) The velocity of an object measures the rate of change in its acceleration.
- 10) Two angles are adjacent if they share the same vertex and have one side in common between them.
- 11) A trapezoid is a quadrilateral that has exactly two sides parallel.
- 12) A set of points is collinear if they all lie on the same line.